

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Canceled).

Claim 2 (Currently Amended) A method of monitoring a concentration of oxygen in a beverage production process, the method ~~characterized by~~ comprising the steps of:

a step of (a) continuously sampling gas in a space part inside a beverage storage tank storing a beverage to be filled, the beverage storage tank being provided to a beverage filler;

a step of (b) measuring a concentration of oxygen in the sampled gas;

a step of (c) comparing the measured value concentration of oxygen in the sampled gas and a preset first reference concentration;

a first determination step of (d) issuing an alarm signal when the measured concentration of oxygen in the sampled gas exceeds the first reference value;

a step of (e) continuously measuring a concentration of oxygen included in the beverage flowing through a beverage supply channel supplying the beverage to the beverage storage tank storing the beverage to be filled, the beverage storage tank being provided to the beverage filler,

a second comparison step of (f) comparing the measured concentration of oxygen in the beverage with a preset second reference value; and

a second determination step of (g) issuing an alarm signal when the measured concentration of oxygen in the beverage exceeds the second reference value.

Claim 3 (Canceled).

Claim 4 (Currently Amended) An apparatus for monitoring a concentration of oxygen in a beverage production process, the apparatus characterized by comprising:

a sampling means for part continuously sampling gas in a space part inside a beverage storage tank storing a beverage to be filled, the beverage storage tank being provided to a beverage filler;

a first measuring means for part measuring a concentration of oxygen in the sampled gas;

a first comparison means for part comparing the measured value concentration of oxygen in the sampled gas and a preset first reference concentration;

a first determination means for part issuing an alarm signal when the measured concentration of oxygen in the sampled gas exceeds the first reference value;

a second measuring means for part continuously measuring a concentration of oxygen included in the beverage flowing through a beverage supply channel supplying the beverage to the beverage storage tank storing the beverage to be filled, the beverage storage tank being provided to the beverage filler;

a second comparison means for part comparing the measured concentration of oxygen in the beverage with a preset second reference value; and

a second determination means for part issuing an alarm signal when the measured concentration of oxygen in the beverage exceeds the second reference value.

Claims 5 (Canceled).

Claim 6 (New) The apparatus as claimed in claim 4, further comprising:

a flow channel for the sampled gas to flow through to an outside of the beverage storage tank; and

a distributor for receiving the sampled gas from the flow channel and delivering the sampled gas to said first measuring part outside the beverage filler,  
wherein said first measuring part constantly measures the concentration of oxygen in the sampled gas.

Claim 7 (New) The apparatus as claimed in claim 6, wherein said distributor is provided to a rotary center shaft of the beverage storage tank provided to the beverage filler, the beverage filler being of a rotary type.